NEW AND RARE MICROCADDISFLIES (TRICHOPTERA: HYDROPTILIDAE) FROM THE EASTERN UNITED STATES[1]

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ABSTRACT: Two new species of microcaddisflies, *Hydroptila tomah* from Maine, and *Oxyethira mcgregori* from Alabama, are described, illustrated and compared to congeners. New illustrations of *H. strepha* and *O. dualis*, closest relatives of the new species, are included for comparison. Both new species appear to be uncommon, based on small numbers collected and a limited range.

Although the caddisfly fauna of both the northeastern and southeastern United States has been fairly well studied, new species continue to be found. This paper describes two new species; one in the genus *Hydroptila* from a single locality in Maine, and another in the genus *Oxyethira* from a few scattered localities in northern Alabama and southern Tennessee. Both species are apparently rare, being represented by one and four specimens respectively. Terminology used in the descriptions follows that of Marshall (1979). Type material will be deposited at the National Museum of Natural History, Smithsonian Institution (NMNH) and at the University of Tennessee (UT).

Hydroptila tomah, NEW SPECIES

(Fig. 1)

Hydroptila nr *strepha*. Huryn and Harris. In review.

In a study of the caddisflies inhabiting the Tomah Stream in southeastern Maine, one of the 27 species of microcaddisflies was identified as a close relative of *Hydroptila strepha* Ross (Huryn and Harris. In review). On comparison with the type of *H. strepha*, this specimen, although similar, was determined to represent an undescribed species.

Diagnosis. A recent review of the five eastern species in the *strepha* group by Sykora and Harris (1994) provided a stable framework for the placement of the new species. This review allowed us a greater degree of confidence in determining that a single specimen represented a new species. *Hydroptila tomah* is most similar to *H. strepha* (fig. 2), particularly in the shape of the inferior appendages. The new species is distinguished by the elongate posterodorsal

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lobes of segment IX, which are noticeably shorter in *H. strepha*, and by the sickle-shaped phallus which is straight in *H. strepha*.

Description. Male. Length 2.8 mm. 27 antennal segments. Brown in alcohol. Venter of abdominal segment VII with short apicomesal process. Segment VIII annular. Segment IX in lateral view deeply emarginate posterolaterally, rounded anterolaterally; in dorsal view deeply incised posteriorly forming pair of elongate lateral lobes, emarginate anteriorly. Segment X truncate laterally; narrow dorsally with slightly flared apex, small median lobe on posterior margin. Subgenital plate a narrow shelf in lateral aspect; in ventral view broadly rounded distally, with pair of stout, median setae. Inferior appendage in lateral view narrow, curving downward distally to enlarged, clublike apex, basally with rounded lateral projection; ventrally with broad base, narrow and gently tapering distally to slightly out-turned apex, mesal margins straight. Phallus tubular basally, distally narrow and sickle-shaped, ejaculatory duct protruding apically and contiguous, thin paramere at midlength encircling shaft.

Female and larva. Unknown.

Type material. Holotype, male. Maine, Washington County, Tomah Stream @ floodplain, N45°28.28', W67°35.58', 1-2 July 1997, A. Huryn (NMNH).

Etymology. Named for the type locality.

Oxyethira mcgregori, NEW SPECIES
(Fig. 3)

Oxyethira dualis Morton. Harris, O'Neil and Lago 1991: 245.

In the course of identifying a series of microcaddisflies from high altitude springs in California, a number of *O. dualis* were identified. To verify the identifications, the California specimens were compared with a small series of the same species from Alabama. On close comparison, it was determined that the material from Alabama, thought to be *O. dualis*, instead represented a similar, but undescribed new species.

Diagnosis. *Oxyethira mcgregori* is very similar in overall appearance to *O. dualis* (fig. 4). The phallus is nearly identical in both species with a distinctive series of short spines at the apex. It is this character which is most easily seen and which can lead to misidentification. The new species is readily separated, however, by the lack of a dorsal bridge from segment IX, which is readily apparent in *O. dualis*. The presence or absence of this character is used in Kelley (1982) to broadly separate the species groups of *Oxyethira*. Since *O. dualis* has been reported from much of North America, the separation of a new species in the southeast suggests what is now being called *O. dualis* may represent a complex of species.

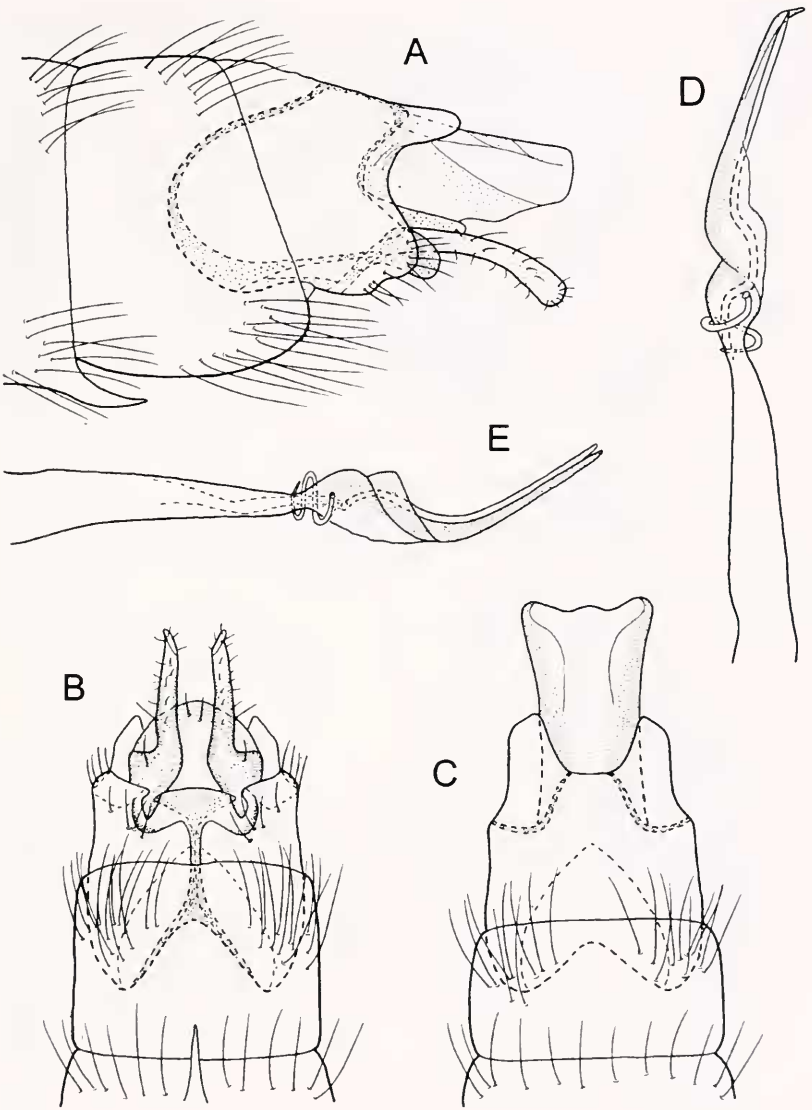

Figure 1. *Hydroptila tomah*, n.sp., male genitalia. A. Lateral view; B. Ventral view; C. Dorsal view; D. Phallus, ventral view; E. Phallus, lateral view.

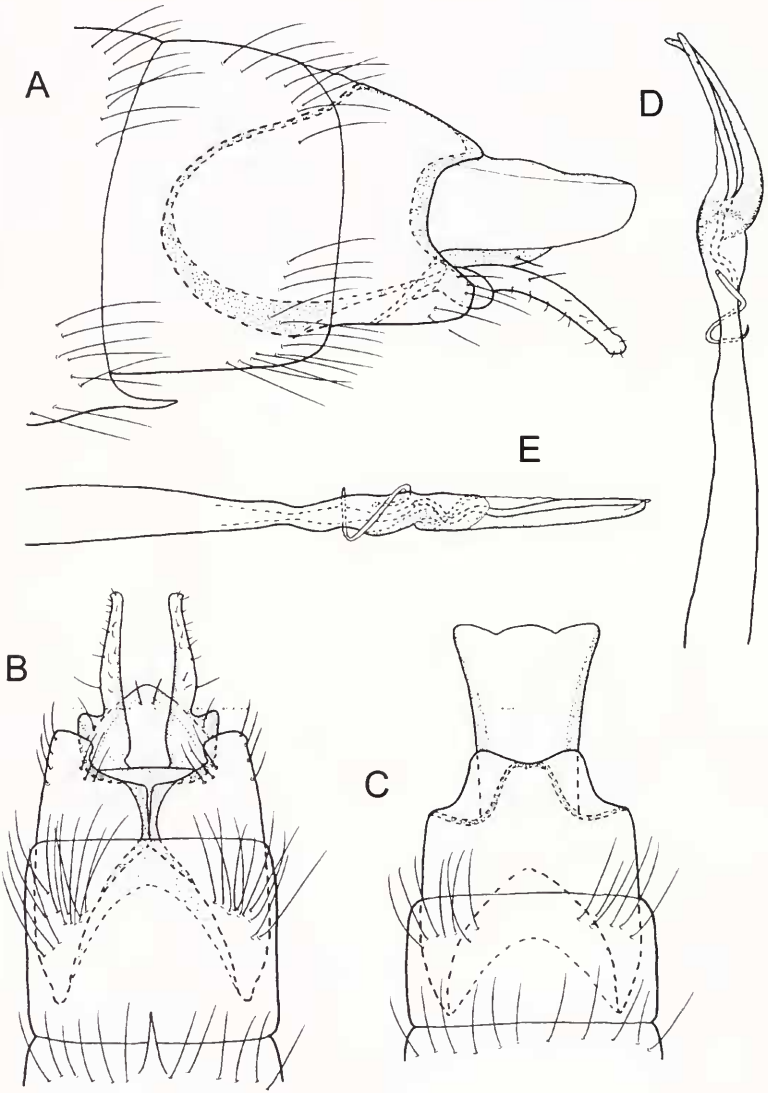

Figure 2. *Hydroptila strepha* Ross, male genitalia, drawn from type. A. Lateral view; B. Ventral view; C. Dorsal view; D. Phallus, ventral view; E. Phallus, lateral view.

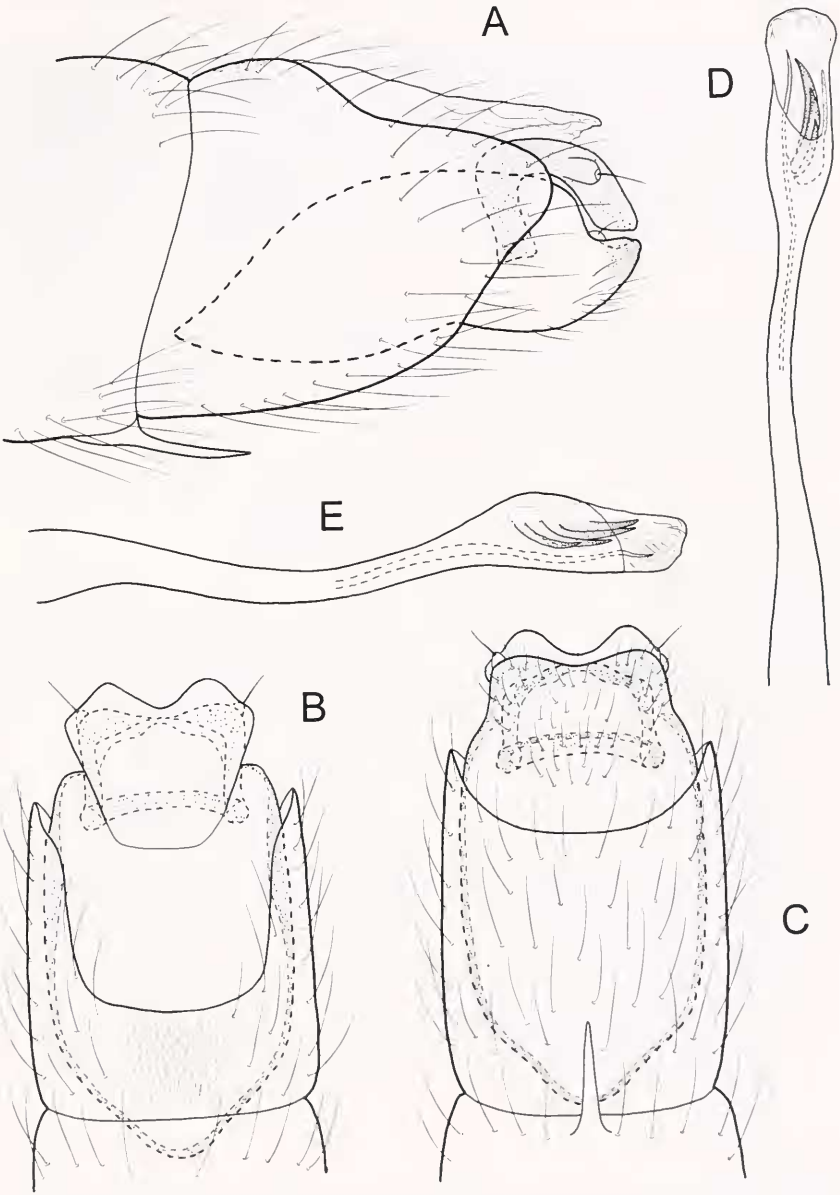

Figure 3. *Oxyethira mcgregori* n.sp., male genitalia. A. Lateral view; B. Dorsal view; C. Ventral view; D. Phallus, ventral view; E. Phallus, lateral view.

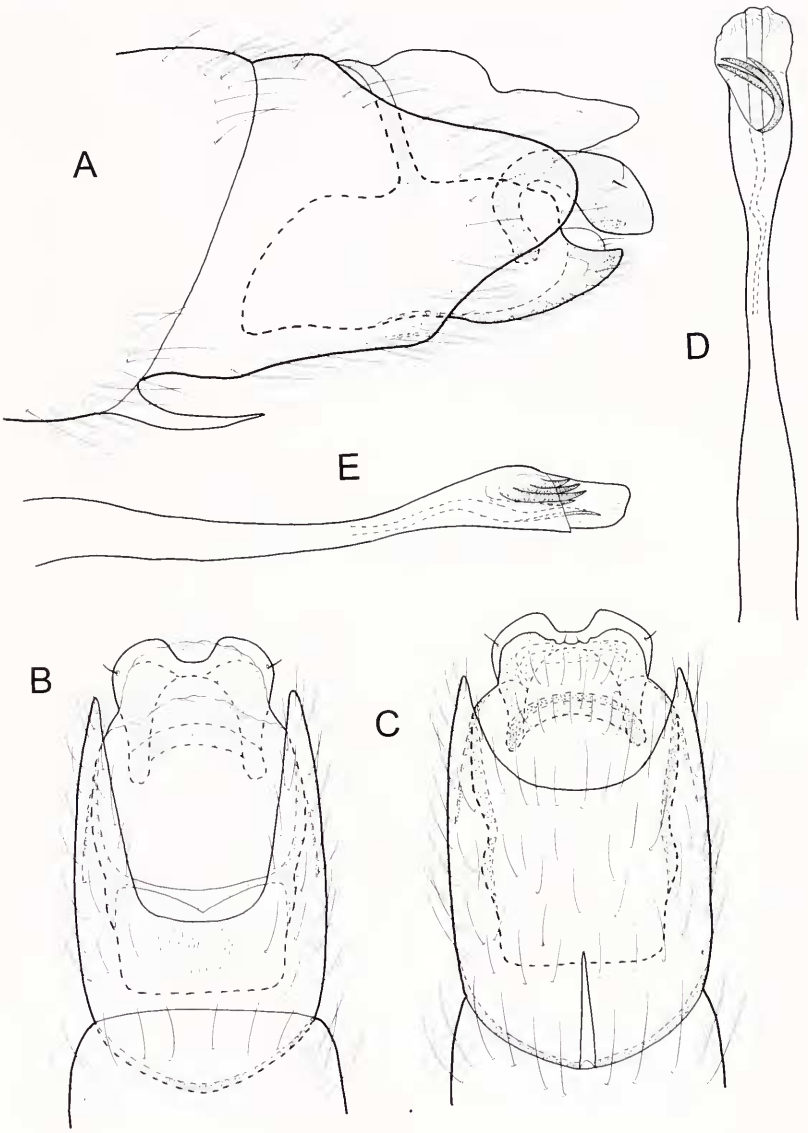

Figure 4. *Oxyethira dualis* Morton, male genitalia, drawn from California specimen. A. Lateral view; B. Dorsal view; C. Ventral view; D. Phallus, ventral view; E. Phallus, lateral view.

Description. Male. Length 2.2-2.4 mm. 32 antennal segments. Brown in alcohol. Venter of abdominal segment VII with short apicomesal process. Segment VIII tapering to rounded lobe in lateral aspect; shallowly emarginate on posterior margin ventrally, margin deeply emarginate dorsally. Segment IX compressed dorsoventrally, lacking any anterodorsal bridge, narrowing posteroventrally; in dorsal and ventral view tapering anteriorly, posteriorly terminating in pair of truncate lobes. Segment X membranous, tapering posteriorly. Subgenital plate strongly arched in lateral aspect, truncate posteriorly. Phallus tubular, wide basally and apically; apex bearing series of four short spines, ejaculatory duct protruding distally as narrow process.

Female and larva. Unknown.

Type material. Holotype, male. Alabama, Lauderdale County, Cowpen Creek @ Co. Hwy. 8, 18 June 1983, S. Harris (NMNH). Paratypes, Alabama, Lauderdale Co., Shoal Creek @ Co. Hwy. 8, 18 June 1983, 2 males (NMNH); Tennessee, Knox Co., Stroud Spring on Northshore Drive, 3 miles W jct. Norell Rd., 25 June 1972, D. Etnier, 1 male (UT).

Etymology. Named for Stuart McGregor, colleague and friend of the senior author, who was born and raised in north Alabama.

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